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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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23914	7590	06/09/2004	EXAMINER	
STEPHEN B. DAVIS BRISTOL-MYERS SQUIBB COMPANY PATENT DEPARTMENT P O BOX 4000 PRINCETON, NJ 08543-4000			QUAN, ELIZABETH S	
			ART UNIT	PAPER NUMBER
			1743	
DATE MAILED: 06/09/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/057,451

Applicant(s)

RUEDIGER ET AL.

Examiner

Elizabeth Quan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-88,90-95,97-115 and 117-120 is/are pending in the application.
- 4a) Of the above claim(s) 53-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 86-88,90-95,97-115 and 117-120 is/are rejected.
- 7) ☐ Claim(s) 86 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/11/2004 has been entered.

Claim Objections

2. Claim 86 is objected to because of the following informalities: "of" should be inserted between "plurality" and "open" in the first line. It appears that "open mouthed" should be hyphenated. Appropriate correction is required.

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). Claim 96 is missing.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 111 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described

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in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. From the instant specification, it appears that it is untrue that the inserts can be inserted into the insert-receiving space in the base in **only a single orientation**. For example, the first orientation may be considered any selected orientation of the insert at which the insert can fit into the insert-receiving space, and the second orientation of the insert is a 180-degree rotation of the insert at the latter designated first orientation, such that the insert can still fit into the insert-receiving space. Furthermore, the insert-receiving space is capable of receiving an inverted insert. It is recommended that structure causing "said inserts can be inserted into said insert-receiving space in said base in only a single orientation" be defined.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 86-88, 90, 92, 94, 97, 101, 105, 106-115, 117-119 are rejected under 35

U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,054,100 to Stanchfield et al.

Stanchfield et al. disclose an apparatus (10) for performing chemistry reactions in a plurality of open-mouthed reaction vessels (24) (figs. 1 and 2; col. 3, line 58-col. 4, line 2; col. 6, lines 54-60). The apparatus may be used in conjunction with a liquid handler of the type having a plurality of individual liquid dispensing means arranged in a pattern (col. 4, lines 3-6; col. 5,

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lines 55-60; col. 7, lines 38-48; col. 11, lines 29-40 and 49-53; col. 15, lines 56-67; col. 19, lines 54-57).

The apparatus comprises a base (63) defining an insert-receiving space (64) and means (14,18) for sealing the mouths of the reaction vessels (figs. 1 and 2). The base comprises a wall defining the insert-receiving space and bottom surface in which the wall is inclined relative to a line perpendicular to the bottom surface of the base by a given amount (fig. 1). The sealing means is mounted above the base between the reaction vessels and liquid dispensing means of the liquid handler (figs. 1 and 2; col. 5, lines 55-65; col. 11, lines 29-40 and 49-53; col. 19, lines 54-57). The sealing means comprises a sealing plate (14) having a plurality of sealable openings (70), each of which is aligned with a different one of the reaction vessels, such that liquid can be dispensed through the sealing plate into the reaction vessels from the liquid dispensing means of the liquid handler (figs. 1 and 2; col. 11, lines 28-40).

The insert-receiving space is situated in operative registration with the liquid dispensing means of the liquid handler, and in combination therewith, first (12) and second (412) inserts alternatively insertable into the insert-receiving space in the base (figs. 1, 2, 6, and 7; col. 6, line 61-col. 31; col. 8, line 48-col. 9, line 64). Each of the inserts comprises a sidewall and bottom surface in which the sidewall is inclined relative to a line perpendicular to the bottom surface of the insert by a given amount (figs. 4-7). The amount of inclination of the wall of the base and the amount of inclination of the sidewall of the insert are substantially equal (figs. 4-7). It appears that the slight amount of inclination of the wall of the base and slight amount of inclination of the sidewall of the insert are each approximate one degree (figs. 1-7). Each of the inserts may be made from a combination of materials permanently or removably joined or fitted

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together, for example, glass for the reaction vessels (24) and plastic for the remainder of the insert, such that the glass reaction vessels are removably joined or fitted with the insert by the vessel-receiving recesses (col. 9, lines 42-55, especially lines 52-55). Since the outlet of each of the reaction vessels protrude from the bottom portion of the insert, it appears that the insert comprises an opening proximate the bottom of the recess to provide for the reaction vessel protruding from the bottom portion of the insert (figs. 1-7). Each of the inserts comprises first and second rounded corners (figs. 4-7). Each of the first and second rounded corners have a different radius since nothing can be duplicated identically even by mechanical means (figs. 4-7). Each of the corners of insert-receiving space has a radius that corresponds to the radius of a different one of the corners of each of the inserts since each of the inserts fits into the base (figs. 1-7). For examining purposes, the limitation of "said inserts can be inserted into said insert-receiving space in said base in only a single orientation" has been interpreted as the base having only a top opening, such that the insert is capable of only being inserted through the top opening. Stanchfield et al. disclose the base with only the top opening, such that the inserts can only be inserted through the top opening of the base (figs. 1-7).

The apparatus comprises an insert extraction tool (66) having protrusion, which is received by the protrusion receiving opening (37) of the inserts (figs. 1-7; col. 10, line 26-col. 11, line 12). One would expect that latching the protrusion of the insert extraction tool onto the opening would at least slightly deform the protrusion, such that the protrusion would be at a relatively expanded state when frictionally engaging the protrusion receiving opening and relatively non-expanded state or at least less expanded than when it was frictionally engaged with the protrusion receiving opening since materials somewhat springs back to its original

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configuration when it is not subjected to force of latching onto an opening. The process of frictionally engaging and disengaging the opening affords both an expanded and non-expanded protrusion, such that the protrusion may be considered both in the expanded and non-expanded state on a “normal” basis. The sidewall of each of the inserts has an outwardly extending lip (26) that rests on the on the insert extraction tool, which is part of the base (figs. 1-7).

Each of the first and second inserts comprises a plurality of individual reaction vessel-receiving recesses arranged in a different array (figs. 1, 2, 6, and 7; col. 7, lines 32-48; col. 8, line 48-col. 9, line 55). The first insert has 96 vessel-receiving recesses arrayed in a rectangular 8 x 12 format, and the second insert has 48 vessel-receiving recesses arrayed in a rectangular 8 x 6 format, such that each of the inserts comprises 24 vessel-receiving recesses, 9 vessel-receiving recesses, and 6 vessel-receiving recesses since the use of open language “comprises” means there might be other structure, such as more vessel-receiving recesses (col. 7, lines 32-48; col. 8, line 48-col. 9, line 41). Each of the vessel-receiving recesses of the second insert is larger than the vessel-receiving recesses of the first insert (figs. 4-7; col. 4, lines 47-62; col. 7, lines 32-48; col. 8, line 48-col. 9, line 41). Each of the reaction vessel-receiving recesses in each of the insert recess arrays is aligned with a different one of the liquid dispensing means of the liquid handler when the insert is received in the insert-receiving space (figs. 1, 2, 6, and 7; col. 4, lines 3-6; col. 5, lines 55-60; col. 7, lines 38-48; col. 11, lines 29-40 and 49-53; col. 15, lines 56-67; col. 19, lines 54-57). Any of the recesses could be used for containing a thermocouple.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 86-88, 90, 92, 94, 97, 99, 100, 102-105, 111, 114, 115, 117-119 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 6,657,169 to Brown.

Brown discloses an apparatus (10) for performing chemistry reactions in a plurality of open-mouthed reaction vessels (140) (abstract; figs. 1-30). The apparatus may be used in conjunction with a liquid handler of the type having a plurality of individual liquid dispensing means arranged in a pattern (figs. 1-30).

The apparatus comprises a base (46,49,40) defining an insert-receiving space and means (90,110,82) for sealing the mouths of the reaction vessels (figs. 1-30). The base comprises a wall defining the insert-receiving space and bottom surface in which the wall is inclined relative to a line perpendicular to the bottom surface of the base by a given amount (figs. 1-30). The base comprises a temperature control fluid channel (79) and means for connecting the temperature control fluid source and channel (figs. 1-30). A temperature control module (70) is interposed between the plate and base (figs. 1-30). The sealing means is mounted above the base between the reaction vessels and liquid dispensing means of the liquid handler (figs. 1-30). The sealing means comprises a sealing plate (110,82) having a plurality of sealable openings (112,84), each of which is aligned with a different one of the reaction vessels, such that liquid can be dispensed through the sealing plate into the reaction vessels from the liquid dispensing means of the liquid handler (figs. 1-30).

The insert-receiving space is situated in operative registration with the liquid dispensing means of the liquid handler (figs. 1-30). A first insert (20) is insertable into the insert-receiving space in the base (figs. 1-30). Each of the inserts comprises a sidewall and bottom surface in which the sidewall is inclined relative to a line perpendicular to the bottom surface of the insert by a given amount (figs. 1-30). The amount of inclination of the wall of the base and the amount of inclination of the sidewall of the insert are substantially equal (figs. 1-30). It appears that the

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slight amount of inclination of the wall of the base and slight amount of inclination of the sidewall of the insert are each approximate one degree (figs. 1-30). The insert has a sidewall with an outwardly extending lip adapted to rest on the base when the insert is received in the space (figs. 1-30). For examining purposes, the limitation of "said inserts can be inserted into said insert-receiving space in said base in only a single orientation" has been interpreted as the base having only a top opening, such that the insert is capable of only being inserted through the top opening. Brown discloses the base with only the top opening, such that the inserts can only be inserted through the top opening of the base (figs. 1-30).

The first insert has 96 vessel-receiving recesses arrayed in a rectangular 8 x 12 format, such that the insert comprises 24 vessel-receiving recesses, 9 vessel-receiving recesses, and 6 vessel-receiving recesses since the use of open language "comprises" means there might be other structure, such as more vessel-receiving recesses (col. 7, lines 32-48; col. 8, line 48-col. 9, line 41). The vessel-receiving recesses in the insert comprising a substantially conical portion with the bottom portion being semi-circular (figs. 1-30). Each of the reaction vessel-receiving recesses in the insert is aligned with a different one of the liquid dispensing means of the liquid handler when the insert is received in the insert-receiving space (figs. 1-30). Any of the recesses could be used for containing a thermocouple.

Brown discloses that the insert accommodates 96 sample wells in an 8 x 12 grid (col. 4, lines 24-26). Brown further discloses that it is to be understood that the number of sample wells can be varied depending on the specific application requirements, e.g. sample wells arranged in a 16 x 24 grid to accommodate 384 wells (col. 4, lines 28-30). Additionally, this apparatus is meant to be reused for several runs of thermally cycling samples, such that one would expect that

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different inserts with different numbers and sizes of wells is associated with the apparatus.

Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a plurality of inserts with different numbers and sizes of wells to accommodate the numbers of samples requiring thermal cycling.

12. Claims 92, 94, and 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,100 to Stanchfield et al. or U.S. Patent No. 6,657,169 to Brown, ~~the prior art~~

~~Stanchfield et al. and Brown do not explicitly disclose that at least one of the inserts has only 24 vessel-receiving recesses, only 9 vessel-receiving recesses, or only 6 vessel-receiving recesses. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use inserts having only 24 vessel-receiving recesses, only 9 vessel-receiving recesses, or only 6 vessel-receiving recesses in the apparatus of Stanchfield et al. or Brown to efficiently accommodate smaller number of assays conducted in parallel.~~

13. Claims 91, 93, 95, 98-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,100 to Stanchfield et al. or U.S. Patent No. 6,657,169 to Brown in view of U.S. Patent No. 6,171,780 to Pham et al.

Stanchfield et al. and Brown do not address whether the recesses are adapted to receive reaction vessels with an 11.6 mm diameter, 17 mm diameter, 24 mm diameter, or 34 mm diameter. It is unclear what the shape of the vessel-receiving recesses in each of the inserts of Stanchfield et al. Pham et al. disclose that it is well known that wells can have diameters up to 50 mm or 100 mm, such that they can hold a 34 mm diameter reaction vessel or greater (col. 13, lines 3-10). Pham et al. also disclose that it is well known that wells may be conical walls with

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round bottoms, vertical walls with round bottoms, or curved vertical walls with round bottoms, and combinations thereof (col. 12, lines 37-44). Therefore, it would have been obvious to one having ordinary skill in the art to modify the apparatus of Stanchfield et al. or Brown to provide recesses adapted to receive 11.6 mm, 17 mm, 24 mm, or 34 mm diameter reaction vessels to accommodate assays of certain volumes and recesses with a substantially conical or semi-circular portion as it is well known to adapt the size, volume, and shape of the recesses of the insert to the assays performed. Additionally, it has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)). It has also been held that changing the form or shape is an obvious engineering design absent persuasive evidence that the particular configuration of the claimed invention was significant (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

14. Alternatively, claims 106-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,100 to Stanchfield et al. or U.S. Patent No. 6,657,169 to Brown in view of U.S. Patent No. 6,159,368 to Moring et al.

Stanchfield et al. disclose an insert extraction tool having a protrusion, which is received in the protrusion receiving opening of the inserts. Stanchfield et al. disclose that alternative insert extraction tools may be used (col. 10, line 26-col. 11, line 12). Stanchfield et al. do not explicitly disclose the insert extraction tool changing between an expanded and non-expanded state to engage and disengage the opening, respectively. Brown does not disclose an insert

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extraction tool. However, Moring et al. disclose an insert extraction tool having a protrusion (192a) wherein the insert (24) has a protrusion receiving opening (194). Since the protrusion (192a) is resiliently deformable, one would expect that the protrusion be at a relatively expanded state when frictionally engaging the protrusion receiving opening and relatively non-expanded state or at least less expanded than when it was frictionally engaged with the protrusion receiving opening in order to create a gap by which the protrusion can be released from the opening. Therefore, the process of frictionally engaging and disengaging the opening affords both an expanded and non-expanded protrusion, such that the protrusion may be considered both in the expanded and non-expanded state on a "normal" basis. These protrusions secure the cover onto the insert, such that robot arms may engage with the cover and transport the insert. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Stanchfield et al. or Brown to include protrusions and associated elements and structure as in Moring et al. to afford automation capabilities for greater efficiency.

15. Alternatively, claim 118 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,100 to Stanchfield et al. or U.S. Patent No. 6,657,169 to Brown.

Stanchfield et al. and Brown do not explicitly disclose that the first and second rounded corners of the insert have different radii or the angle of inclination of the wall normal to the plane of the top surface of the insert is approximately 1 degree. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the radii of the first and second rounded corners different or the angle of inclination approximately 1 degree since it has been held that where the only difference between the prior art and the claims was a

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recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)). It is also noted that imperfection is intrinsic to duplicated elements, such that differences in radii in the corners are inevitable. Furthermore, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

16. Claim 120 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,100 to Stanchfield et al. in view of U.S. Patent No. 6,126,904 to Zuellig et al. or U.S. Patent No. 6,306,658 to Turner et al.

Stanchfield et al. disclose that the apparatus is suitable for general organic synthesis and provides for heating, agitation, addition by syringe, and the like (col. 4, lines 3-6). Stanchfield et al. do not disclose vessels contained within the recesses with a stir bar longer than the diameter of the vessel in which the bar is received. However, Zuellig et al. disclose the use of magnetic stir bars that move longitudinally back and forth along the inner surface of the reaction vessel (figs. 1B and 1C; col. 7, line 60-col. 8, line 22). It appears that the magnetic stir bars may be longer than the diameter of the vessel in which the bar is received. The stir bars cause gentle mixing action and efficient mixing action. Turner et al. show a magnetic stir bar (702) that is longer than the diameter of the vessel in which it is received to thoroughly mix liquids (col. 20, line 42-col. 24, line 57). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus Stanchfield et al. to provide a

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magnetic stir bar that is longer than the diameter of the vessel as in Zuellig or Turner et al. to provide thorough mixing of the contents within the reaction vessel as required or desired to perform the syntheses.

17. Claims 102-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,100 to Stanchfield et al. in view of U.S. Patent No. 5,609,826 to Cargill et al.

Stanchfield et al. disclose that the apparatus is suitable for general organic synthesis, providing for heating, agitation, addition by syringe, and the like (col. 3, line 67-col. 4, line 2). Stanchfield et al. do not explicitly disclose the base comprising a temperature control fluid channel, temperature control fluid source, means for connecting the source and channel, and temperature control module adapted to be interposed between the plate and base. Cargill et al. disclose a similar apparatus with a base (306) defining an insert-receiving space for receiving inserts (140), means (155,153) for sealing the open mouths of the reaction vessels (110) comprising a sealing plate (155) having a plurality of sealable openings (162), and collection plate (302) for collecting materials drained through the filter within the reaction vessels (figs. 1-16). The base comprises a plurality of temperature control fluid channels (310A,310B) and means (320A,320B) for connecting the temperature fluid control source and the base (col. 5, lines 36-40; col. 11, line 28-col. 12, line 30). In instant specification the temperature control module, which is made of heat conducting metal and has a series of flow channels, surrounds the reaction vessels. Cargill et al. disclose that the reaction block is preferably machined out of 6061 aluminum, has a series of flow channels, and surrounds the reaction vessels, such that the insert may be considered a temperature control module. The configuration of Cargill et al. provides for efficient heating and cooling of the insert (col. 5, lines 36-40). Therefore, it would have been

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obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Stanchfield et al. to provide the recited thermal elements for efficient heating and cooling as taught by Cargill et al.

18. Claims 112, 113 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,657,169 to Brown.

Brown does not disclose that the insert has rounded corners or frame has rounded corners. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the shape of the corners of the insert and/or frame round, since it has been held that changing the form or shape is an obvious engineering design absent persuasive evidence that the particular configuration of the claimed invention was significant (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (571) 272-1261. The examiner can normally be reached on M-F (8:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elizabeth Quan
Examiner
Art Unit 1743

eq


Jill Warden
Supervisory Patent Examiner
Technology Center 1700